

WHAT IS CLAIMED IS:

1. A voice message processing system, comprising:
 - a distributed voice message (VM) data store storing voice message data indicative of a plurality of voice messages;
 - a distributed voice data processor, coupled to the VM data store, configured to access the voice messages, extract desired information from the voice messages and augment the VM data stored in the VM data store with the desired information; and
 - a user interface component coupled to the VM data store and configured to provide user access to the augmented VM data.
2. The system of claim 1 wherein the distributed voice data processor comprises:
 - a rule application component configured to receive user rule inputs indicative of user-selected rules and to apply the user-selected rules to the augmented VM data.
3. The system of claim 2 wherein the distributed voice data processor comprises:
 - a speaker identification model data store storing at least one speaker identification model; and
 - a speaker identification component configured to access the speaker identification model data store and provide an indication of an

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identity of a speaker associated with the voice message corresponding to the VM data.

4. The system of claim 3 wherein the distributed voice data processor comprises:

a speaker model training component configured to receive VM data and train a speaker identification model based on the VM data and a user input indicative of a speaker of a voice message corresponding to the VM data.

5. The system of claim 2 wherein the distributed voice data processor comprises:

an acoustic feature extractor extracting acoustic features from the VM data, the acoustic features being indicative of the desired information.

6. The system of claim 4 wherein the acoustic feature extractor is configured to extract features indicative of a speaker emotion and provide an emotion output indicative of the speaker's emotion.

7. The system of claim 4 wherein the acoustic feature extractor is configured to extract features indicative of a speaking rate and provide a rate output indicative of the speaking rate.

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8. The system of claim 7 wherein the distributed voice data processor comprises:

a rate normalization component configured to receive the rate output and normalize an associated voice message to a preselected speaking rate.

9. The system of claim 2 wherein the distributed voice data processor comprises:

a speech-to-text component configured to generate a textual output indicative of a content of a voice message.

10. The system of claim 9 wherein the speech-to-text component is configured to generate a transcription of the voice message as the textual output.

11. The system of claim 9 wherein the distributed voice data processor comprises:

a summarization component configured to generate a summary of the voice message.

12. The system of claim 9 wherein the distributed voice data processor comprises:

a semantic parser configured to generate a semantic parse of at least a portion of the voice message.

13. The system of claim 2 wherein the rule application component sorts voice messages based on the desired information.

14. The system of claim 2 wherein the rule application component generates alarms based on the desired information.

15. The system of claim 2 wherein the user interface component generates a user interface exposing user-selectable inputs for manipulation of the voice message by the user.

16. The system of claim 15 wherein the user-selectable inputs comprise:

a rate changing input which, when actuated by a user, changes a speaking rate associated with voice messages.

17. The system of claim 15 wherein the user interface displays a textual indication of a content of a voice message.

18. The system of claim 15 wherein the user interface displays an identity indication indicative of an identity of a speaker of a voice message.

19. The system of claim 15 wherein the user interface displays an emotion indicator indicative of an emotion of a speaker of a voice message.

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20. The system of claim 15 wherein the user interface displays a rule indicator indicative of rules being applied.

21. A method of processing voice messages, comprising:

storing the voice messages at a distributed voice message (VM) data store;

intermittently accessing the VM data store to determine whether a new voice message has been stored;

for each new voice message, processing the new voice message at a distributed processor to obtain extracted data including speaker identity, acoustic features indicative of desired information, and a textual representation of a content of the new voice message; and

augmenting data in the VM data store with the extracted data.

22. The method of claim 21 wherein processing the new voice message to obtain acoustic features comprises:

obtaining acoustic features indicative of an emotion of a speaker of the new voice message and generating a speaker emotion output indicative of the speaker's emotion.

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23. The method of claim 21 wherein the acoustic features include a speaking rate indicator indicative of a speaking rate of the speaker of the new voice message, and further comprising:

normalizing the speaking rate to a user-selected speaking rate.

24. The method of claim 21 wherein obtaining speaker identity includes providing an unknown output when speaker identity is determined to be unknown and further comprising:

receiving a user input indicative of a speaker identity for the new voice message; and
training a speaker identification model based on the new voice message and the user input.

25. The method of claim 21 and further comprising:

receiving a rules input indicative of user-selected rules to be applied to the new voice message; and
applying the user-selected rules based on the extracted data.

26. The method of claim 21 and further comprising:

semantically parsing the textual representation of the new voice message.

27. The method of claim 21 and further comprising:

generating a user interface to the VM data store, the user interface including user-

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actuatable inputs for manipulating the voice
messages in the VM data store.

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